March 12, 1941

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CONTROL
Insect
Annual Report,
1940

Chief,
Forest Service,
Washington, D. C.

Dear Sir:

The annual reports from Forest Supervisors, reports from individual forest officers and a report by Mr. R. L. Furniss, Associate Entomologist from the Forest Insect Laboratory, Portland, Oregon, have been summarized to give the forest insect conditions as found in the Region for the year 1940.

BARK BEETLES
(Dendroctonus and Ips)

The annual reports from the forests show conditions normal as to bark beetle damage on all forests of the region. The Ips outbreak, which occurred during 1939, in the current cutting on timber sale areas of the Arizona Lumber & Timber Company on the Coconino Forest and on the sale area of the Saginaw & Manistee Lumber Company on the Kaibab Forest, has subsided with very little or no killing on the areas during 1940.

The Kaibab North Division of the Kaibab Forest was examined by Ranger David C. Scott, who reports that no Dendroctonus ponderosae Hopk. beetles were found during the year. An examination of a group of sorrel-topped trees near Highway 89 north of Jacob Lake Inn showed that Ips oregoni Eich. had entered the tops and the limbs about half way down the boles. The Highway has been reconstructed during the year and the Ips evidently came from a build-up in the material cut in clearing the right of way. On October 15, Associate Entomologist R. L. Furniss examined portions of the north rim of the Grand Canyon

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National Park and parts of the Kaibab north of the Grand Canyon. In his report he states: "On neither of these areas were any evidences seen of current activity of the Black Hills beetle. A few of the widely 'scattered red tops' that were seen were examined and found to contain Dendroctonus barberi, D. approximatus and Ips knausi. The examination revealed no areas in need of control, although it should be stated that a very large portion of the Kaibab was not seen."

The Prescott reports the insect control work done during January to May, 1940, in the Horsethief Basin recreational area was successful in greatly reducing the damage and number of trees killed for 1940. This area was visited and examined on October 12 by Mr. R. L. Furniss, Associate Entomologist, accompanied by Assistant Forest Supervisor J. C. McNelty of the Prescott Forest, and Robert C. Salton, Forester, from the Regional Office in Albuquerque. At the time of this examination there were still a few groups of insect-killed trees. The forest is planning to do control work in April and May, 1941, in an effort to clean up the insect damage in this area. The report on insect control work done on the Horsethief Basin area during January to May, 1940, follows:

Year: 1940
Project Name: Horsethief Basin Recreational Area
Forest: Prescott
Duration of Project: January 9 to May 7, 1940.
Tree Species Affected: Ponderosa pine
Insects Responsible: D. barberi Hopk., D. arizonicus Hopk., D. approximatus Dietz, D. convexifrons and Ips lecontei, SW.
Total Acreage Involved: 7,200 acres
Method Followed: Trees felled, bark from the larger trees was peeled from infested areas and burned; the stems of the smaller pole-sized trees were piled and burned until bark was well scorched; the bark was removed and burned from a few standing trees where the bark beetles were found to a height of only 10 or 12 feet from the ground.
Number of Trees Spotted: 2,472 trees 4 inches D.B.H. and up.
Number of Trees Treated: 2,472 trees.

Expenditures from project funds (ERA) direct costs:	$1,378.06
Expenditures contributed time and expenses:	324.90
Total Cost of the Project:	1,702.96
Total Cost per Tree:	69¢

Percent of Reduction Obtained: 75%
Number of Man Days Used: - 383 (ERA funds)
Results: Satisfactory and outbreak controlled.

The Copper Basin area on which control work was done in 1939, is in very good condition, with only a few scattered trees showing up in the fall of 1940. The forest is planning to do some follow-up work on this area, removing and treating these scattered trees.

The Lincoln Forest reports that some bark beetle damage is still found in the Ruidoso and Cloudcroft areas; however, it was not serious during 1940. Associate Entomologist R. L. Furniss spent a part of two days examining the Ruidoso area and areas in James, Sixteen Springs and Cox Canyons in the vicinity of Cloudcroft. Insects found in killed and dying trees were Dendroctonus convexifrons, Ips oregoni, I. cloudcrofti, and I. integer. He stated in his report as follows: "At present, control on national forest land is not necessary, but a careful lookout should be maintained to make certain that there is no marked increase from the existing active source of infestation on private land." The forest plans to keep a close watch of these areas for any indications of increased bark beetle activity.

A brief inspection of the Chiricahua Division of the Coronado Forest was made on October 10 by Associate Entomologist R. L. Furniss. No infestation was found. Specimens of bark beetles taken from two large Apache pines (Pinus apachea) included Dendroctonus barberi, D. arizonicus, D. approximatus and Ips lecontei. Examination of a large dying Arizona pine (Pinus arizonica), which had been injured by road construction and fill, showed Dendroctonus approximatus and secondaries, chiefly a round-headed borer.

On a trip across the Tonto Forest from Globe, Arizona via Parker Creek, through the Sierra Anchas Mountains to Pleasant Valley and on to Payson and Pine, Associate Entomologist Furniss had an opportunity to see and examine red top and fading trees on that areasof the Tonto on which considerable insect damage has occurred during the past few years. The predominating species of bark beetles found on this area were Dendroctonus barberi, D. Arizonicus, D. approximatus, Ips ponderosae and I. lecontei. No control is necessary at this time; however, it is planned to keep a close watch for indications of increased activity.

The Crook Forest reports a heavy infestation of bark beetles in the pinon on Eagle Creek Ranger District in T 1 N, R 30 E, G. & S. R. P. M. No specimens of the insects were found at the time of the examination in October, 1940.

No damage in the fir type by the Douglas fir beetle (Dendroctonus pseudotsugae) was reported from the Carson and Santa Fe Forests. It appears that this infestation was endemic and conditions are normal again.

TIP MOTH

Damage by tip moth in ponderosa pine on the Apache, Carson, Coconino, Cibola, Lincoln, Kaibab, Santa Fe, Sitgreaves and Tonto Forests in 1940, was similar to that in 1939, and about normal.

SPRUCE BUDWORM
(Archips fumiferana)

The Carson Forest reports increased activity and damage by the spruce budworm during 1940. The losses are in the younger age class trees. The increased infestation is greatest on the Rio Pueblo, Vallecitos and Tres Piedras Ranger Districts. Conditions on the Santa Fe and Coconino Forests are normal.

GREAT BASIN TENT CATERPILLAR
(Malacosoma fragilis)

Reports from the Carson and Santa Fe Forests state that the infestation is greatly reduced. These forests report that areas heavily infested two or three years ago are now almost entirely free; however, there are still extensive infested areas in the aspen type. The Cibola Forest reports infestations on the Mt. Taylor and Magdalena Division of the forest; however, these infestations are reported as not serious.

FALL WEBWORM
(Hyphantria cunea Drury)

The Lincoln Forest reports these webworms are still active in the Lower Ruidoso Valley where there is a considerable number of native walnut trees.

CONE WEEVILS

The Coconino Forest reports heavy damage to both the ponderosa pine and pinon pine 1940 seed crop due to cone weevils.

MATSUCOCCUS SCALE

The Prescott Forest reports that the damage by Matsucoccus scale is not apparent; in fact, no twigs have been examined this year that could be identified as having been killed by the scale.

LEAF MINER

The Carson Forest reports an outbreak of leaf miner in aspen stands on the Rio Pueblo Ranger District. Some of the stands were completely defoliated; however, the damage does not appear serious at this time. No specimens were collected, as the insects were gone before the damage was discovered.

The Kaibab Forest reports that aspen defoliators did considerable feeding near Quaken Aspen and on V T Ridge on the Kaibab North. No specimens were collected, since the defoliators were gone at the time of the examination.

PINE BUTTERFLY
(Neophasia menapia)

The Kaibab Forest reports that this pine butterfly was found during July throughout the ponderosa pine type on the Kaibab North. No damage has been found that might be attributed to this insect.

SAWFLY

During the latter part of May, 1940, Ranger John S. Hall, while working on a survey of needlecast defoliation on Douglas fir for the Division of Forest Pathology, noted a severe insect defoliation on small Douglas fir trees in Nogal Canyon on the White Mountain Ranger District of the Lincoln Forest. He found a number of larvae defoliators and made notes of the larvae and the nature of their work. In July, Mr. Hall was in this vicinity and attempted to collect some of the larvae or adult insects, but was unable to find either. He did collect specimens of twigs on which the larvae had fed. There were a few cast skins in these specimen twigs. This material was sent to Senior Entomologist J. M. Miller at Berkeley, California. There were no insects in the material for identification; however, Mr. Miller reported the cast skins as those of the sawfly larvae and the needle damage as characteristic of feeding injury of the sawfly defoliators. An attempt will be made to check this area during early June, 1941.

MAY BEETLES or JUNE BUGS
(Possible beetle genera Dichelonyx and Scythropus)

Specimens of ponderosa pine twigs, on which the beetles had fed to the extent that damage was very noticeable, were collected by Supervisor Merker of the Carson Forest and Robert C. Salton of the Regional Office, Albuquerque, while on a trip over the Tres Piedras Ranger District with

Mr. L. S. Cress of the Division of Timber Management, Washington office. Specimens of these twigs were forwarded to the Bureau of Entomology for identification, if possible, of the insect responsible for the damage. It was impossible from the material submitted to identify the insects doing this damage. This area is to be examined again this spring and, if possible, specimens of the insects responsible for the damage will be collected.

Very truly yours,

FRANK C. W. POOLER, Regional Forester

By:

MORTON M. CHENEY Acting